

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): ~~An elasto-plastic socket for a Land or Ball Grid Array (LGA/BGA) package, comprising~~ The assembly of claim 12, wherein the L/BGA socket is an elasto-plastic socket comprising:

an insulative board defining ~~one or more matrices~~ a plurality of housing openings and a plurality of holes proximate to edges of the insulative board;

a plurality of metal contacts fitting in the housing openings on the insulative board, wherein:

the metal contacts plastically deform under another pressure to conform the metal contacts to vertical variations of elements above and below the elasto-plastic socket;
and

the plastic deformation of the metal contacts uniformly distributes the another pressure;

a laminate bonding layer applied on the insulative board to fix the ~~plurality of~~ metal contacts;
and

a plurality of alignment members fitting in the ~~plurality of~~ holes on the insulative board for aligning the ~~LGA/BGA~~ L/BGA package to the metal contacts.

Claim 2 (currently amended): The ~~elasto-plastic socket assembly~~ assembly of claim 1, wherein the metal contacts each ~~comprise~~ comprises a top surface portion for contacting a package pad, a curved plate spring portion of ~~different~~ differing width connected to the top surface portion, a contact wall portion providing sliding contact with the curved plate spring portion and a PCB contact portion.

Claim 3 (currently amended): The ~~elasto-plastic socket assembly~~ assembly of claim 2, wherein the top surface portion has a concave spherical surface for contacting a BGA package.

Claim 4 (currently amended): The ~~elasto-plastic socket assembly~~ of claim 2 or 3, further comprising a solder ball attached to the PCB contact portion for surface mount on the PCB.

Claims 5 and 6 (canceled).

Claim 7 (currently amended): The ~~subsystem~~ assembly of claim ~~[[13]]~~ 12, wherein the elasto-plastic stiffener comprises:

a top plate;

a bottom plate having retaining means for retaining positioning of the stiffener to the package substrate; and

a serpentine shaped supporting structure sandwiched between the top and the bottom plates, wherein the serpentine shaped supporting structure allows for large deformation in thickness of the stiffener while supporting a desired pressure, ~~[[;]]~~

Claim 8 (currently amended): The ~~subsystem~~ assembly of claim 7, wherein the stiffener is formed of a single piece or multiple pieces of sheet metal.

Claim 9 (currently amended): The ~~subsystem~~ assembly of claim 7, wherein the serpentine shaped support structure is a wave shaped structure perpendicular to the top and the bottom plates.

Claim 10 (currently amended): The ~~subsystem~~ assembly of claim 9, wherein the serpentine shaped support structure is slanted ~~inside inward~~ toward the semiconductor chip of the L/BGA package or ~~leaned outside~~ slanted outward.

Claim 11 (canceled).

Claim 12 (currently amended): An improved Land/Ball Grid Array (L/BGA) integrated circuit ~~subsystem assembly~~, comprising:

a bolster plate;

a printed circuit board (PCB) above the bolster plate;

a L/BGA socket mounted on the PCB;

a L/BGA package mounted on and aligned with the L/BGA socket, the L/BGA package comprising:

a package substrate; and

a semiconductor chip mounted on the package substrate;

an elasto-plastic stiffener mounted on the package substrate of the L/BGA package, the elasto-plastic stiffener sharing a pressure with the semiconductor chip;

a frame mounted on the PCB and surrounding the L/BGA socket, ~~and~~ the L/BGA package, and the elasto-plastic stiffener;

a heat transfer device ~~placed above~~ mounted on the L/BGA package, the elasto-plastic stiffener, and the frame, wherein;

~~the PCB is sandwiched between the bolster plate and the frame; using multiple fasteners, the frame provides increased stiffness to the subsystem, and~~

the subsystem assembly is secured with fasteners through the heat transfer device, the frame, the PCB, and the bolster plate so that ~~the~~ a top surface of the L/BGA package have tight intimate contact with ~~the~~ a bottom surface of the heat transfer device;

the elasto-plastic stiffener is plastically deformed under the elasto-plastic stiffener's portion of the pressure to conform the elasto-plastic stiffener to vertical variations of elements above and below the elasto-plastic stiffener; and

the plastic deformation of the elasto-plastic stiffener defines an upper bound for the elasto-plastic stiffener's portion of the pressure, which in turn defines the semiconductor chip's portion of the pressure.

Claim 13 (canceled).

Claim 14 (currently amended): The subsystem assembly of claim [[13]] 12, wherein the L/BGA package is selected from the group consisting of a lidded package with a small lid and a lidless package.

Claims 15 to 20 (canceled).

Claim 21 (currently amended): The ~~elasto-plastic-socket assembly~~ of claim 1, wherein the alignment members [[is]] are selected from the group consisting of pins or spring clips.

Claim 22 (currently amended): The ~~elasto-plastic-socket assembly~~ of claim 2, wherein the metal contacts are plated with gold and are stamped and formed from sheet metal.

Claim 23 (currently amended): The ~~elasto-plastic-socket assembly~~ of claim 22, wherein the sheet metal is selected from copper alloys including BeCu.

Claim 24 (currently amended): The ~~subsystem~~ assembly of claim 12, wherein the fasteners are screws.

Claim 25 (currently amended): The ~~subsystem~~ assembly of claim 12, wherein the heat transfer device is a heat sink.

Claim 26 (currently amended): The ~~subsystem~~ assembly of claim 14, wherein the L/BGA package further comprises [[:]] the package-substrate; the semiconductor chip mounted on the substrate; and a thin layer of heat spreader having a very high in-plane or isotropic thermal conductivity adhered to a top side of the semiconductor chip, the heat spreader spreading heat from hot spots ~~one~~ on the semiconductor chip.

Claim 27 (new): The subsystem assembly of claim 12, wherein the subsystem is further secured with additional fasteners through the frame, the PCB, and the bolster plate.